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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,437	01/05/2001	Richard L. McCreery	OSU1159-141	5136
8698	7590	08/23/2005	EXAMINER	
STANDLEY LAW GROUP LLP 495 METRO PLACE SOUTH SUITE 210 DUBLIN, OH 43017			ZACHARIA, RAMSEY E	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/755,437

**Applicant(s)**

MCCREERY, RICHARD L.

**Examiner**

Ramsey Zacharia

**Art Unit**

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8,9,12-18,44 and 46-54 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 8,9,12-18,44 and 46-54 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 July 2005 has been entered.

#### ***Claim Rejections - 35 USC § 102***

3. Claims 8, 9, 13, 18, 47, 49, and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver et al. (U.S. Patent 5,208,154).

Weaver et al. teach an electrode having a surface treated with an electrochemically active material that is then connected to an electrical source to allow charged particles to adsorb onto the treated surface (column 2, lines 24-35). The electrochemically active material extend out from the electrode in a substantially parallel manner (Figures 1 and 2). A preferred material for the electrode is conductive carbon (column 3, lines 57-59). Quinone, i.e.  $O=C_6H_4=O$ , is a suitable electrochemically active material (claim 1). Since all the bonds in quinone are conjugated, the bond through which it is attached to the surface must be conjugated.

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***Claim Rejections - 35 USC § 103***

4. Claims 12, 15-17, 44, 46, 48, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al. (U.S. Patent 5,208,154) in view of Wegner et al. (U.S. Patent 4,828,917).

Weaver et al. teach all the limitations of claims 12, 15-17, 44, 46, 48, and 51-53, as outlined above, except for requiring the substrate to have a roughness less than or equal to the average length of the electrochemically active material and less than 5 Å.

Wegner et al. disclose that when forming a monolayer on a substrate it is known make the substrate smooth to allow for the formation of a well defined layer (column 4, lines 35-38).

One of ordinary skill in the art would be motivated to make the electrode surface of Weaver et al. as smooth as possible to ensure that the layer of electrochemically active material applied to the surface is well defined.

***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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6. Claims 8, 9, 12-18, 44, and 46-54 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7-11, 16, 22-30, and 56-58 of U.S. Patent No. 6,855,950. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions of instant claims 8, 9, 12-18, 44, and 46-54 represent a genus of which the inventions described by claims 1, 7-11, 16, 22-30, and 56-58 of U.S. Patent No. 6,855,950 are species. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). The instant monolayer material is generic to monolayer construction of U.S. Patent No. 6,855,950. Therefore, 1, 7-11, 16, 22-30, and 56-58 of U.S. Patent No. 6,855,950 represent a species of instant claims 8, 9, 12-18, 44, and 46-54.

### ***Response to Arguments***

7. Applicant's arguments filed 28 July 2005 have been fully considered but they are not persuasive.

The applicant argues that the quinone of Weaver is not directly bonded to the substrate but rather is attached to the substrate through an intermediary Si-linkage. As such, it is argued that the quinone is not attached to the substrate through a conjugated bond.

This is not persuasive because combination of the silane and the electrode (e.g. conductive carbon) reads on a substrate. The claimed substrate is not required to be homogeneous or single layered and therefore an electrode coated with a silane is taken to be the substrate.

With respect to independent claim 47, a substrate consisting essentially of conductive carbon can still include a silane layer since the transitional phrase "consisting essentially of"

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leaves the substrate open to the incorporation of any material that does not materially affect the basic and novel characteristics of the claimed invention. In the absence of a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." If an applicant wishes to contend that additional materials in the prior art are excluded by the recitation of "consisting essentially of," the applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. For further discussion on the transitional phrase "consisting essentially of", see MPEP 2111.03.

With respect to the double patenting rejection, because Application No. 10/376,865 has been allowed and issued as U.S. Patent 6,855,950, the rejection is no longer provisional.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ramsey Zacharia**  
**Primary Examiner**  
**Tech Center 1700**